

SIDE-SHOW AND ANIMAL TRICKS

**BY
HEREWARD CARRINGTON**

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Side-Show and Animal Tricks

Tricks of the Side-Show Performer, Animal Tricks,
Gamblers' Tricks, Juggling Secrets, Stage Effects,
Ventriloquism, Etc., Etc.

BY

HEREWARD CARRINGTON

Author of "Hindu Magic," "Handcuff Tricks,"
"The Boys' Book of Magic," Etc., Etc.

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TO
HOWARD THURSTON
(With Warmest Regards.)

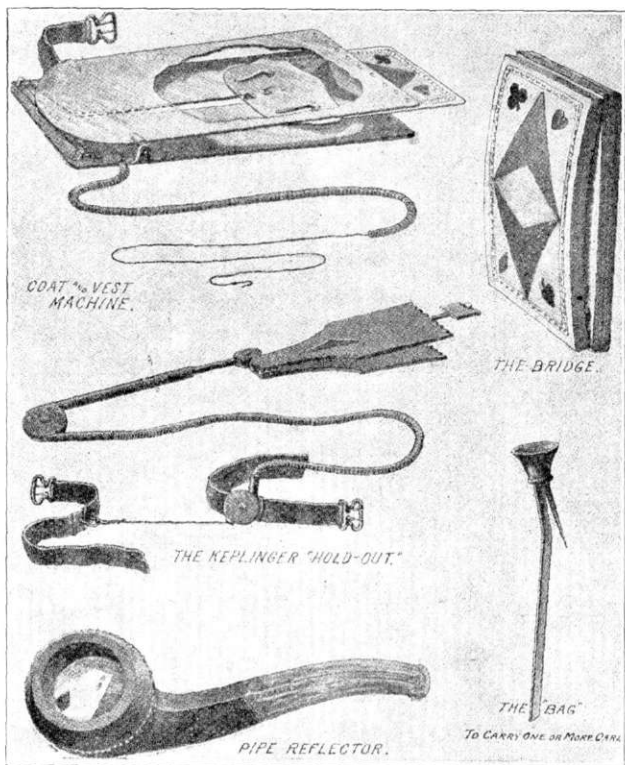
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INTRODUCTORY NOTE.

The following booklet will, it is hoped, prove of interest to those who are desirous of obtaining additional information in the outlying fields of the art of conjuring, and to those who value historical data in connection with magic and magicians. My best thanks are due to the editors of the "*Scientific American*" for permission to reprint, in this booklet, portions of my articles on "Animal Tricks" and on "Gamblers' Secrets"—which had previously appeared in their magazine. To Messrs. Harry Kellar and Howard Thurston I desire, also, to acknowledge my indebtedness for several valuable suggestions.

H. C.



FRONTISPIECE.

Side-Show and Animal Tricks

Who does not remember visiting the dear old "Side Show," as a boy, where were exhibited the oddities—the "freaks," the thin man and the fat woman, the giant and the dwarf—Tom Thumb—Jo Jo, the dog-faced boy—the "bearded lady"—Jumbo—Gumbo—the Siamese Twins—and a host of others! One wonders at times what has become of all these old "freaks"—now that the Side-Show is practically a thing of the past. My curiosity prompting me to make some investigations in this direction, I was rewarded with the following results:

When the last of the "Wild Men of Borneo" died at Waltham, Mass., which was about as close as he had ever been to Borneo, there was genuine interest shown wherever the obituary of the strange little man was read.

His name had become a household word, when he and his companion freak were traveling, making small boys feel creepy each afternoon and evening, and no other specimens of strange men have ever quite taken the place of these two semi-dwarfs with their long gray whiskers and fierce look.

Plenty of imitators were found and exhibited, but the originals remained in a class by themselves as long as they cared to remain in the

business and stand chained during each performance while a fluent lecturer told of the tremendous effort it had been to capture them and how difficult it was to keep them in captivity.

One of this well remembered pair, "Waino," died five years ago, but "Plutano" lived until a few months ago.

It is said they were from the wilds of Ohio, not from Borneo, but that is one of the secrets of the showman's profession.

Chauncey Morian, Barnum's fat man, died a few weeks ago at Elwood, Ind., and his wife arranged the funeral for five o'clock in the morning to keep the curious away. Morian was forty-three years old, and when he joined a circus in 1889 he weighed 853 pounds. His first wife weighed 553 pounds. Morian went into business at Elwood after he ceased exhibiting himself.

Jumbo, the biggest elephant ever in captivity,—which died trying to save a baby elephant from a railroad engine, reposes (stuffed) in the natural history collection of Tufts College.

Colonel Frank P. Stone, of Boston, who has been "next friend" to all the best freaks, declares Gumbo is also at Tufts.

"Gumbo," said Colonel Stone, "was the biggest orang-outang in the world. She was owned by the King of Portugal. I leased her for a year for \$2,000 and she died the very day the contract was up. Gumbo and the contract expired to-

gether, so to speak. The King of Portugal had no use for a dead 'rang, so I had Gumbo stuffed and gave her to Tufts College."

Jo Jo, the dog-faced boy, is back in that dear Burmah, it seems. Jo Jo—or Joseph Joseph, to be formal—is one of the hairy Burmese. He made his debut in America five years ago, and returned to his hairy relatives four years later. He was a good sport while here, and his bark was worse than his bite.

Colonel Stone says Chang, the Chinese, was the tallest of all giants. Chang was 8 feet 4 inches in his socks. He died eighteen years ago.

The original tattooed man was Captain Constantinus. He was a Greek. He was captured by pirates, who tattooed every inch of him. He was an ugly customer.

Fanny Mills, the girl with the big feet, came from Chicago. Her feet were a yard long and were beautifully formed. Fanny retired ten years ago, and died three years later.

Chicago furnished at least one more museum freak—in addition to the others not yet in captivity. This one was Annie Irwin, the tallest woman. Annie was 8 feet 3 inches tall; she retired on her earnings, and is living in a Chicago suburb.

The most famous of all midgets, "Tom Thumb," has been dead for years. His widow married another midget and is now living in Meriden, Conn. Commodore Nutt, "Tom" Thumb's coachman, has been dead for years.

Crou, the original missing link, is a Miss, but not missing. She is a feminine "link" and is playing the Western side stands with a circus.

Annie Jones, the finest bearded woman ever seen, is also following the circus game. Her beard is eighteen inches long.

"Ike" Sprague, the original living skeleton, is dead, and a medical school got his body for \$500. "Ike" was five feet five inches tall and weighed sixty-five pounds. He could not hold up his body on his legs and had to be carried.

Jonathan Bass, the original ossified man, was a Bridgeport (Conn.) bridge builder. He fell ill and gradually ossified. He lived five years more and in that time made money enough as a museum freak to leave his relatives well-to-do.

It may interest the reader to know that the cause of "gigantism" is now known to science—as well as the causes of midgets or dwarfs. Embedded in the hardest bone in the body, at the base of the skull, is a tiny body called the pituitary gland, which is in many respects the most wonderful in the body. The gland is divided into two parts—only the front portion seeming to be active. The whole gland weighs about five grains. If this little gland be unduly irritated or stimulated—by a growth within the brain, for instance—frightful deformities of all the bones take place—particularly of the face, hands and feet. The latter grow enormous, and if the changes begin early in life, the whole body is affected, so that

we have a "giant," who grows to seven or eight feet in height. Thus the giant is no longer considered a paragon of strength—as in the fairy tales. He is considered a pathological specimen, whose pituitary gland is diseased! On the other hand, if this gland wastes or "atrophies," the body does not grow to its proper dimensions, and then we have a "dwarf." This is the cause of the dwarfs we see in the side-show, the circus and elsewhere. (See the Chapter on "The Scientific Truths Contained in Fairy Tales," in my book, *The Problems of Psycnical Research*.)

But, aside from these individuals, who represent so many oddities of nature, there were other features to be seen in the Side-Show—sword swallows, fire-eaters, men who danced upon broken glass, snake-charmers, and a host of others who seemed to defy Nature and set her laws at naught! A brief description of some of the most noteworthy of these tricks should be of interest—if only from the historical point of view—and I shall accordingly explain, in the pages which follow, how those various "marvels" are performed, and we can then see how far the laws of Nature are subverted during the course of their performances!

Let us begin with sword-swallowing. It must be admitted that, in the majority of cases, there is almost no trick about this performance at all; it is perfectly genuine—incredible as that statement may appear. Doubtless, in some cases, a

trick sword is used—in which the blade collapses, and gradually enters the handle of the sword—but in the majority of cases, the feat is genuine. The throat is toughened by continued practice, and by rubbing it with various chemicals to toughen the skin; then the head is thrown as far back as possible and the sword gradually introduced into the gullet. A blunt steel sword, about twelve or eighteen inches in length is procured, measuring about one-half inch in breadth, and the sixteenth of an inch in thickness. Just before the performance, it is rubbed with a piece of flannel—this serving the double purpose of cleaning the blade and warming it. The blade is then carefully lowered into the throat. Hindu jugglers sometimes swallow chains, and one can hear them clanking in their insides!

One very wonderful trick, sometimes witnessed, is this: The performer breaks a number of bottles with a hammer, scattering the pieces of glass about on the wooden floor upon which he is to dance. When he has broken a number of bottles in this manner, he suddenly jumps into the middle of the mound of glass, and begins to dance and leap upon it. Apparently, his feet must cut to pieces; but as a matter of fact, he comes out quite unscathed!

In order to perform this test, the juggler procures a shallow box, about four feet square, and from three to six inches deep. He then breaks up a number of *thick* glass bottles, and breaks

these up into *small* pieces. He then goes over the edges of these pieces and rounds them off with a file. Then, with the aid of a blowpipe, the edges of the glass smoothed over, until there are no sharp edges left. The glass is then emptied into the box, and banked up, mostly in the center. When the bottles are broken before the spectator's eyes, these freshly broken, sharp pieces are scattered around the *edges* of the box, and the performer takes good care that none of these pieces find their way into the center. The performer has previously prepared the soles of his feet with resin, rubbing it in thickly; and, what with this, and the previous preparation of the glass, it is no very difficult feat to dance about upon it without receiving any dangerous injury.

Closely allied to the above test is the one in which the performer (usually a Japanese) walks upon a number of sharp swords, generally arranged to form a sort of ladder—the sharp or cutting edges being upward—and for that reason it has earned for itself the name of “the ladder of swords.”

The chief factor about this trick is the following: Sharp edges of any sort very rarely cut so long as the material to be cut is not *drawn* across their surface, but is merely pressed against the cutting edge. Accordingly, if we have a man with peculiarly tough feet, and train him to walk upon sharp edges, he can walk on quite

sharp edges after a time, without cutting his feet. So long as the swords are stepped on carefully, and the sword-walker takes care never to draw his foot along the edge of any sword, he is practically safe from cuts. He prepares himself for the test in the following manner: He gets a piece of iron rod, and practises standing on this rod many times daily. When he has attained a comparative freedom from pain, when standing on this rod, he sharpens the rod somewhat; by filing off the edges, and making the rod assume the shape of a sword-blade. After practising this for a number of days, he sharpens the rod still more, and so on until it is practically as sharp as a blunt sword. He then begins to practise with the sword itself, and sharpens the sword more and more as he goes along. He also takes other measures to harden and toughen his feet as much as possible—walking with bare feet, rubbing the soles of the feet with resin, etc. When the performance comes off, he rubs his feet well with careful not to drag his feet, and to balance himself on the sword-edges. Under these conditions, it is almost impossible for the performer to cut himself.

There is a side-show "act" called the "human pin cushion," which always arouses a great deal of interest and speculation. The performer runs pins into himself—in all parts of his body—where they are seen sticking out of him, at various angles—being, apparently, imbedded more or less

their entire length. The performer then borrows a lady's gold brooch, and allows anyone in the audience to stick the pin into him—he offering his breast for that purpose. He then sticks pins through his ears, a needle through his arm, and a knitting needle through his leg, and everyone can see them sticking out in these various directions. The performer then makes his bow, and retires.

That is how the feat appears to the audience. Now for the explanation: Instead of *real* pins and needles being used in the first instance, the performer has prepared a number of small pieces of wire, cut into various lengths, exactly resembling pins and needles or portions of them. When any one of these is inserted into the flesh ever so slightly, it gives the appearance of being imbedded some distance, and a number of these may be left, sticking into various parts of the body. When this part of the performance is finished, the juggler extracts all his bits of wire, and borrows the gold brooch pin. There is no trickery about this part of the exhibition, in most cases, and any one can go up to the performer and insert the pin into his breast. The secret consists in the fact that the flesh had previously been treated with cocaine, until the sense of pain was deadened. The pin may then be run into the flesh with impunity. For the concluding part of the performance, a little more pains must be taken, and more preparation is required. A doctor is visited, and

he pierces the ears, arm and leg of the future performer. He then inserts pieces of gold wire into the punctures, and allows the wounds to heal with the wire still in place. The result is that small holes are permanently left in the flesh. It is into these holes that the pins, needles and knitting needle are inserted. Well performed, this is a very clever and sensational feat.

We now come to "fire-eating" performances, in which the performer handles blazing coals, drinks boiling liquid, holds molten lead in his mouth, and in other ways proves that fire, in any shape or form, cannot harm him. Needless to say, the majority of such performances are trickery, and I shall describe the methods that are employed in order to effect these apparent marvels.

One of the most popular of these tricks is the one in which the performer places large wads of cotton into his mouth, chewing them up until it would seem that he has eaten a bushel of the material! He then begins to blow smoke from his mouth, until a great quantity of smoke and sparks are seen to issue for no assignable cause.

In order to accomplish this, the performer chews up the cotton first introduced into a small wad, and, in the act of placing the next handful into his mouth, he extracts the one first introduced, and so never has more in his mouth at one time than the one handful. When the proper time has arrived, the performer introduces a wad

of cotton which contains a piece of punk (lighted). This smolders, and tends to set the cotton on fire. The smoke and sparks are due to this cause. As soon as the cotton begins to catch fire, the mouth is tightly closed, and the fire is "dampened" sufficiently to prevent it from actually bursting into flame. As it would be extinguished very soon, if the mouth were kept tightly closed, it is very soon opened again, and the performance gone through once more. This is repeated until the spectators have had enough; or until the punk is all consumed.

Another "act" closely akin to the above is that known as "the living gas jet." In this case, the performer shows his mouth empty, then takes a lighted candle, and holds it about six inches in front of his mouth. He then blows upon the flame of the candle, when his breath is seen to take fire and burn brightly—a stream of fire issuing from his mouth! This is a very puzzling performance, when seen for the first time; yet the explanation is, as usual, simplicity itself. The performer has a small sponge, which he has saturated with gasoline, and secreted this about his person. He introduces this sponge into his mouth, in the act of wiping it with his pocket handkerchief, just after showing it empty. The sponge is saturated with the gasoline and concealed in the pocket handkerchief. Now, when the performer blows upon the lighted candle, his breath will

take fire (owing to the fact that it is saturated with the fumes of gasoline) and burn brightly.

There is the trick of apparently drinking molten lead with impunity. The "lead" is poured into the performer's mouth, who retains it until it is cooled, then ejects it in front of the spectators—thus showing them there is no "trickery."

For this performance the juggler has prepared a mixture of metals as follows: bismuth, 5 ozs.; lead, 3 ozs.; block tin, 2 ozs. These are melted together in a ladle. They are then poured into a spoon, and thence into the mouth. The secret, such as it is, lies in the fact that this particular mixture will melt in boiling water; it requires no very great heat to melt it. As soon as melted, it is poured into the spoon, which serves to cool it still further; and from the spoon, it is no very difficult task to take the mixture into the mouth. The moisture of the mouth will serve to cool the mass still further. As soon as the mixture is cooled, *i. e.*, when it is quite solid, it is ejected from the mouth, and the spectator is asked to come upon the platform and see whether or not the mixture is "hot." He of course asserts that it *is*—since liquids and solids may be held in the mouth, and even swallowed with impunity which are far too hot to handle with comfort—a fact known to but few persons.

There is the trick, again, of drinking "burning oil." The performer fills a large iron spoon with oil, and lights it before the eyes of the spec-

tators. He then takes a smaller iron spoon, and dips it into the larger spoon, bringing it out full of blazing oil. He places this directly into his mouth, and swallows it down. He repeats this several times, until the oil is all swallowed—which fact the performer demonstrates by turning the original spoon upside down. It is then seen to be empty.

The pouring of the oil into the first spoon and the lighting of it are perfectly genuine. When the performer pretends to dip the smaller spoon into the larger one, however, he does not do so in reality, but only wets the spoon and brings it away slightly moist, with the oil clinging to the spoon blazing. At the moment of raising this spoon to the mouth, the performer blows on the flame, and so extinguishes it. This is repeated several times. When all this performance has been gone through, the oil in the original (large) spoon will have burned itself out, so that the performer is now free to turn this spoon upside down.

The trick is often seen in which the performer places together two clay pipes—just shown empty—and proceeds to blow smoke from his mouth immediately. He shows the pipes empty whenever desired, and as often as desired, yet, immediately he places the two pipes together again, he proceeds to puff smoke from his mouth. The trick, in this case, is a chemical one, and depends upon the preparation of the clay pipes. In one is placed (just before the “act” is exhibited)

a few drops of pure muriatic acid, and in the other a concentrated solution of ammonia. When the bowls of the two pipes are placed together, clouds of smoke are formed, which the performer proceeds to puff out of his mouth. This trick is used by conjurors, and is the basis of one or two good illusions.

There are several feats that are performed by professional fire-eaters which are somewhat dangerous, and consist more in hardihood, or a sound constitution than in any trickery. The trick known as "biting off a piece of red hot iron" is one of these. The iron is heated to a red heat, and the performer then places one end of this rod or bar in his mouth, and breaks off the rest. The only trick about the performance is that the bar has been filed to an extreme thinness in one spot, so that it will break off very easily; but the grasping of the red hot iron in the teeth, and holding it there while the bar is bent—there is no trickery about that. Great care must be taken, while performing this trick, that no part of the iron touches the lips or tongue.

Another feat of somewhat similar type is the following:

A tablespoonful of alcohol is poured into a saucer, and several raisins are thrown in it. The alcohol is lighted. The performer then proceeds to eat the raisins with a fork. Again, there is no actual trick connected with the performance, and the performer really swallows the raisins.

Sometimes the performer undertakes to drink boiling oil or boiling liquid of any character. He heats the liquid in a tin cup, over a fire, and the spectators can see the steam issuing from the top of the cup. When it boils, the performer lifts the cup to his mouth, and drains it, showing it is empty by holding the cup upside down.

In this case, the performer has a cup provided with a double bottom. A small opening has been cut in one side, through which liquids pass and re-pass into the lower compartment. When any liquid is poured into the cup, therefore, it runs into this lower compartment, and is heated within it. When the liquid is boiling, and the performer wishes to show it *is* boiling, he tips up the cup, with the side containing the slit or opening beneath, and the contained liquid is then allowed to run into the upper compartment, and so out of the cup. When he wishes to "drink" the liquid, he turns the cup upside down, but is careful to see that the side of the opening is now at the *top* of the cup, and pretends to drink—going through the process of swallowing, etc. He can then almost completely invert the cup—apparently showing it empty—for so long as the slit-side is uppermost, no liquid can escape.

Among other feats performed by "fire-kings" are the following: "Sealing wax" is melted and allowed to fall upon the tongue. It is not really sealing wax that is used, but a preparation resembling it, which melts at a low temperature.

The moisture of the tongue will prevent the wax from burning it for the first few seconds it is allowed to rest upon it. Some performers apparently go through the act of eating burning coals. The "coals" in this case are pieces of burnt cotton, placed in a saucer, and saturated with alcohol. When lighted, they will, at a distance, look like blazing coals, and the performer proceeds to eat them with a fork. As soon as they are in the mouth, they will be extinguished.

It is asserted that some performers eat coals of fire out of the blazing furnace. This is accomplished (I am informed) in the following way: A hot charcoal fire is made in the furnace. Just before commencing the act, three or four pieces of soft pine are thrown into the fire, and when these are burnt "to a coal," they cannot be distinguished from charcoal except to the touch, when a fork is inserted into them. These will be soft, and the real charcoal will be hard and brittle. It is asserted that these coals will not burn, when placed in the mouth. This was told me by a practical fire-eater.

For all these tricks, it will be observed, a tough mouth is required, and performers who make their living at fire-eating will frequently suffer much, without showing any signs of pain. Their living depends upon it, and they are frequently burned quite badly. But there are various artifices which tend to make their performances easier and safer. One of these is to prepare

the mouth by washing it out with the following preparation: One ounce of powdered alum, one ounce bicarbonate of soda, one ounce castile soap, one ounce pure water; mix together until well dissolved, and add one pint of strong vinegar; let this stand forty-eight hours. The mouth is then rinsed out with this preparation several times, until a good coating is formed in the mouth—when many of the feats above described may be performed with perfect impunity.

There are other preparations that may be used for the same purpose; some of which I have already described in my *Physical Phenomena of Spiritualism*, pp. 402-4. For example:

“Dissolve one-half ounce of camphor in two ounces of *aqua vitæ*; add one ounce of quicksilver, and one ounce of liquid stryax, which is the product of the myrrh, and which prevents the camphor from igniting. Shake and mix well together. Bathe the inside of the hand and the fingers in this preparation, allowing it to dry in, and you can duplicate the performance with the lamp chimney, and hold your fingers in the blaze quite a while without any bad effects.

“If it is desired to hold a handkerchief over a flame, without burning it, or to pass the hair through the fire without singeing it, all the medium has to do is to soak the hair or the handkerchief in a solution made in the following manner: Fill a teacup with water, and in this dissolve all the salt the water will contain. In another cup,

dissolve a tablespoonful of soda, in warm water. Now pour the two solutions together, and mix them thoroughly. When this is done, the hair, the handkerchief, or whatever article it is proposed to pass through the flame, is soaked in this mixture. Allow each article to thoroughly dry. They may now be passed through the fire uninjured.

"It is said that articles soaked in alum water are fireproof to a certain extent. It has also been asserted that, by rubbing the soles of the feet with a preparation of salt water and powdered red stone (the proportion being two ounces of red stone to a cupful of brine) several steps may be taken over red hot iron, without injury."

Blazing coal may also be imitated by a piece of spongy platinum, held in the hand, upon which a stream of hydrogen gas is allowed to play. The platinum will then become incandescent, and will look from a distance like a red hot coal. The hydrogen is supplied through a tube, passing down the performer's coat sleeve, and terminating in a gas bag, concealed beneath his coat.

So much for the fire tricks that may be seen in the side-show of a circus. Now let us consider some of the other sights that are to be seen, and see how far trickery enters into the case, and in what it probably consists. There are various "freaks" which we sometimes see—among them, and one of the most interesting, being the girl whose hair stands straight up, like a corkscrew!

This is not natural, and is made to stand up in the following way: The hair is soaked in stale lager beer for some time, and is then done up in leads, while still wet. These leads are left on for three days, but during that time, the hair is taken down, and soaked twice a day. At the end of the three days, the leads are carefully removed, and the hair combed upwards, when it will be found to stand straight up and be long and wavy.

Then there is the three legged lady! A woman sitting on a chair is seen to possess three legs—any of which she can use and move at will—thus apparently proving that they are all directly under her will and volition. The secret consists in the fact that a *second* woman is hidden behind the first one's chair, and slides her leg along a groove in the seat of the chair under the first (visible) woman. In this manner, three legs are brought to view—the second woman's body being hidden behind the first woman's chair.

Occasionally we see illusions where only the head or the head and shoulders (bust) of a woman are seen "suspended in space," or resting upon a board, a bunch of flowers, etc. In most of these cases, the secret consists in the fact that a *mirror* is so arranged as to reflect the wall or the floor of the small room in which the woman is placed, and gives the impression that the rear wall is visible, while, as a matter of fact, only the reflection of the walls or floor is seen. In such cases, the woman posing for the "act" generally

wears a false bust or body-front, which goes down to the board on which she apparently rests—allowing her body to slope away at a convenient angle toward the rear. In some cases, the illusion is effected by means of black draperies and bright lights, which shine directly into the spectators' faces, and render it almost impossible for them to see the woman's body—which is also clothed in black. Sometimes the body is supported on a board, which extends backwards from the spot where the head appears. In such cases, a cane or stick may be passed under the head, thus showing, apparently, that no body is present beneath the head which is seen. Sometimes, again, the bust is seen swinging from a trapeze, all sides of which may be seen free from the floor as it swings to and fro. In this case, the lower part of the assistant's body is doubled up, and tucked into a very small, flat space about two feet or less square and six inches deep. This is concealed by long fringes, and, being so shallow, gives the impression that nothing could be concealed in so small a space. As this position is very confining, the assistant must be released every few minutes and permitted to walk about.

JUGGLING TRICKS.

It may now interest the reader to learn the secrets of a few juggling feats which depend upon trick apparatus. A large number of the feats of the professional juggler are, of course,

perfectly genuine, and depend upon the performer's dexterity; but some of the more remarkable are due to cleverly arranged devices, or to trick apparatus. A few of these I shall briefly describe.

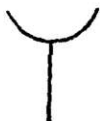
First, there is the time-honored dodge of "weighting" certain articles in particular spots or places—so that, wherever they are thrown into the air—no matter at what angle—they will always descend weighted-side down. Chief among these are: weighted knives, bottles, hats, Indian clubs, etc. In the case of silk hats, a rounded leaden weight is fastened to the inner lining of the crown of the hat. This will be found greatly to facilitate matters. A trick cigar is also used by most jugglers.

The performer occasionally performs what appears to be a remarkable feat of dexterity. He allows an ordinary egg to be examined; also a straw, such as those used at soda fountains. He then takes the egg and, apparently with great effort, balances the egg on the end of the straw! On removing his hand, the egg is seen to be in that position.

This clever sleight is effected by means of a small piece of apparatus, which the audience never sees. The egg and the straw are perfectly genuine—though the egg is often blown, to reduce the weight. In such cases, the performer usually substitutes the blown egg for the original one by palming.

Secreted in his hand, the performer has hid-

den a small cup-shaped piece of apparatus, curved somewhat as follows:



EGG BALANCE.

In the act of picking up the egg, its lower end is slipped into the little cup, while the short spike is inserted into the end of the straw. (All this is done under cover of the fingers.) If the egg be held *below* the eye-level of the spectators, the cup cannot be seen, and the feat has every appearance of being perfectly genuine.

The following is a clever trick, sometimes seen:

The performer exhibits a sword, which may be examined. He now borrows a coin, and placing the coin upon its edge on the sword, he causes it to run up and down the blade without falling off. The explanation is that the borrowed coin is substituted, at a convenient moment, for another, which has its edge "doctored." A deep groove is cut into the edge all the way round, and this groove fits over the edge of the sword. In this way there is little difficulty in balancing the coin, and causing it to run to and fro on the edge of the sword.

Eggs and balls are sometimes seen to run along the upper surface of a borrowed cane. This feat looks extremely difficult, but depends upon a simple device, which is hidden from the audience. To the center of the egg or ball is attached

a piece of bent wire, to the other end of which is fastened a leaden weight. When the ball is placed upon the top of the stick, the weight falls just behind and slightly below the stick, and serves to keep it in position. With this device, the ball is securely balanced upon the upper edge of the stick, and will run to and fro freely, without falling off.

Sometimes the apparently miraculous feat is seen of balancing two and even three billiard balls upon one another, the lowest one resting on the butt of the cue. There are several ways of accomplishing this feat—two of the simplest being the following:

(1) The balls are hollow and “weighted” inside with shot. Top and bottom of both balls are slightly flattened, and when these flat surfaces are juxtaposed, the balls may be balanced upon one another with comparative ease. The slightest movement, such as clapping the hands, will, however, dislodge the balls, which thereupon fall and are caught by the performer.

(2) The balls are prepared by inserting a very fine needle point in one side, and boring an extremely fine hole in the opposite side of the ball. When the needle points are inserted into the small holes, the balls stay in their proper position, if carefully balanced.

When several objects are placed or balanced one upon another, these are almost invariably joined together by some such means. A fine

needle point will project from an object, and fit into a small hole in the object next it. When playing cards are used—as is sometimes the case—these are made of thin sheet steel, japanned, and have a small needle running diagonally across them, from corner to corner. Upon this needle-point the object is balanced.

The following pretty illustration is sometimes seen: The performer borrows a handkerchief and a walking stick, and, throwing the handkerchief into the air, he catches it on the point of the stick, and proceeds to spin the handkerchief round and round, which is seen to open out flat. Anyone else trying to do so, however, will find the feat quite impossible.

The trick consists in a false ferrule placed over the real ferrule on the borrowed cane, to which is fastened a short needle, projecting directly outwards. When the handkerchief is thrown into the air, it is caught upon this needle point, and it will be found possible to spin the handkerchief round and round, at great speed, without coming off. This must be done by means of a peculiar circular motion imparted *from the wrist*—the arm being kept stationary. The effect upon the audience is that the feat is genuine, but if anyone tries to repeat it, he will find it quite impossible. Needless to say, the performer removes and palms the trick ferrule before handing the cane back to its owner—or to anyone else who may desire to try the experiment!

HOW ANIMALS ARE TAUGHT THEIR TRICKS.

The training of animals, teaching them to perform all sorts of entertaining tricks, is a task that requires perhaps a special talent on the part of the trainer, but above all demands patience and a thoroughly methodical procedure. Let us begin with the dog, and see how he is taught his tricks. We commence with the simplest and gradually work up to the most complex and apparently impossible feats.

The first thing every dog must learn is his name. Select a short, sharp-sounding name, and stick to it. Never call him anything else. If you have several dogs, the name is taught on the same principle. Divide their food, and then, placing a piece on the ground, call each in turn by his name, and give him the food when he comes for it. Send the others back if they come forward out of their turn. By and by they will learn that a certain name is always associated with a certain dog. Ramble among the dogs, and call out one of their names every now and then. If the right dog comes to you, reward him with a piece of cracker. Pay no attention to the other dogs. They will learn very soon; and the first great lesson—dependence and obedience—will have been learned.

Having taught a dog to fetch and carry—which he will easily learn—the next thing is to teach him to go and get any object called for.

Place a glove on the floor; then say to the dog, "Fetch the glove," putting the accent on the last word. Then, when he has done this several times, place a shoe on the floor; and teach him to fetch this in a similar manner. Now place both objects on the ground, and teach him to fetch either one, as asked for—rewarding him when he brings you the right one, and rebuking him when he fetches the wrong, which you take from him and replace. He will soon learn to distinguish the articles, when a third may be substituted, and so on until a number are on the floor. You should then go into the next room, taking the dog with you; and send him in to fetch any article you mention. After a little while, he will bring you the right one every time.

Next, teach him differences in color. Place a red object on the floor, and a blue one beside it. Teach him to fetch you the article called for as you did before, being careful to reward him every time he brings you the right handkerchief. Then put down a green object, a purple, a yellow one, and so on; until finally the needed array of colors can be placed for selection.

Next, he should be taught the articles of furniture—table, chair, etc. He must go to each one as you call out its name. Finally, combine some of the previous commands: "Place the glove on the chair"; "Get the handkerchief, and place it on the table," etc. At first this should be said very slowly, and only half the command repeated

at once; but the halves of the sentence may be gradually blended together, until you can say it as you would to any individual; and the dog will obey your command.

To a certain extent, also, dogs may be taught the letters of the alphabet, the numbers of spots on cards, large dominoes, etc. The method of training them is simply one of constant repetition. Cards bearing the letter or number are placed in front of the dog, and the letter or number is called out aloud, and at the same time the dog is shown which one it is. After several trials, he will select this one and disregard the others, when it is called for. This once learned, the next letter is taught in like manner, until a large number are recognized by the dog, and he is able to pick out any of them at will. Plants are also to be selected in a similar manner, from a row placed on the table, and so forth.

It must be admitted, however, that most feats of this character, as performed in public, are the result of some trick, rather than any marvellously elaborate training on the part of the dog, which would be necessary if these feats were genuine—granting them to be possible at all. As a matter of fact, most of these apparently marvellous feats are based on a very few cues, given to the dog at the appropriate time, to which he has been taught to respond in a simple manner. A few examples will make this clear.

Many of these feats are performed by means

of a cue word, in just the same kind of way as "mind-readers" entertain and puzzle their audiences. As soon as this word is given, it may be in the course of a sentence, the dog knows that he is to perform a certain action. It is not necessary for him to understand the whole of the sentence; only one word in it. As soon as that word is caught, the action is performed. Each action corresponds to a certain cue word. Again, there is the method of training by the use of the eyes. The dog watches his master's eyes, and when his master glances in any direction—at a card, for example—the dog can follow his glance, and pick out the card in turn. Or the dog may be told to bark out a certain number, in which case the dog watches his master's face closely, and simply barks until the eyes, or some movement, tell him to stop. He does not have to know that he barks nine times. All he has to know is that he must go on barking until he is told to stop by his master's signal; and the trainer is the one who does all the counting.

There are certain stage tricks which depend very largely upon the dog's memory, however—such as picking up a numbered card, and the like. The cards are arranged in a row, and the trainer stands in front of the row in which the card rests. A string is attached to the dog's neck. First the dog is trained to go to the row of cards nearest the trainer; then, if he is inclined to pick up one too near, a slight pull on the string is

given, pulling the dog up to the required card. The trainer stands at a certain distance from the table in these tricks; if close to the table, the dog knows it means card one; if farther away, card two, and if still further, card three. By care in training, the dog can be taught to pick out any required card, without in any way knowing the number written upon it. When the dog has been taught to pick up any card by means of this code, the trainer may appear to make it far more complicated by causing the dog to add, subtract, multiply, etc. All that is necessary, of course, is that the performer himself should do the sum, mentally note the position of the card giving the answer, and indicate this card to the dog by means of some hidden code.

In the same way, horses can be made to rap out any desired number, tell the date of a coin, etc., by simply pawing the ground until the trainer gives them the signal to stop by means of some secret sign, unnoticed by the onlooker. This explanation does not fit the case of the "Thinking Horses of Elberfeld," for whose performances I can offer no solution.

The dog may also be trained to perform a number of pretty and striking tricks by means of a set of flowers, each of which is representative of some characteristic or trait of character. Mr. Charles L. Burlingame, some years ago,-

formulated a very complete "Language of Flowers," used for this purpose, and explains his method of working the trick as follows:

"First the trainer must have a mechanic make twelve small plates of wood or metal, each two inches wide by three inches long. Each plate has a piece about one inch long attached to one corner, at right angles to it, to serve as a mouth-piece for the dog. . . . Fastened upright in the center of each plate is a rod about eight or ten inches high. Imitation flowers made of cloth, silk or woolen material are attached to these upright rods. Paper flowers must not be used. These little bouquets are then placed on the table in two rows, six in each row. The rows must be about two feet apart. This will place a row on each side of the trainer, which leaves the center space to be occupied by the dog, who sits facing the exhibitor, giving him room to move about comfortably without displacing or knockoing over the bouquets. These small bouquets must stand far enough apart to prevent their leaves from touching, so that others are not knocked over, as the dog picks up one of them in his teeth. The performer must then learn by heart the exact position of all the flowers, so that he knows them blindfolded. We will suppose the flowers selected are the following: Forget-me-not, white lily, tulip, corn blossom, violet (or pansy), red rose,

evergreen, red pink, poppy, auricula, white rose, carnation. These are arranged in their proper order.

"The symbols for these twelve flowers are as follows:

"The forget-me-not represents fidelity, hope, remembrance; the white lily, purity, innocence, virtue, power, freedom, majesty; the tulip, vanity—beauty without spirit, etc.; the corn blossom, childish simplicity, faith; the gray violet, suffering, love; the red rose, love, pleasure, etc.; the evergreen, friendship, immortality; the red pink, ardent love, a noble mind; the poppy, sleep, dreams, death; the auricula, poetry, modesty; the white rose, purity, innocence; the carnation, confidence, beauty, etc."

When the experiment with the dog is about to be performed, the exhibitor shows each flower to the spectators, explaining just what each one represents. He then asks a lady to name any flower she would like the dog to pick up. When she has decided, he takes up his position near the desired row, as though by accident, and the dog is thus "told," by silent code what flower to pick up. The exhibitor then says: "Don Pedro, hand me the rose," or whatever it may be. The dog, being accustomed to notice the distance, immediately picks up the flower desired. The trainer then takes the flower from the dog's mouth, shows it, and replaces it on the table. This may be repeated as often as desired.

When the dog has picked out a sufficient number of flowers to satisfy the spectators that he can read and understand the "language of flowers," the performer changes the form of his question, and asks: "Don Pedro, what flower is the symbol of childish simplicity?" If the trainer is close to the proper row and at the proper distance to designate this flower, the dog will certainly pick up the corn blossom. "Don Pedro, which flower is the symbol of purity and innocence?" The dog picks up the white rose. "Don Pedro, which flower represents patient love?" The dog picks up the gray violet. And so on, until your audience becomes thoroughly convinced that the dog really understands what is said to him!

Now for something more complicated! "Don Pedro, if a scholar at school wants to sleep instead of getting his lessons, what flower would you give him for a prize?" The dog picks up the poppy. "Don Pedro, let us suppose you have a sweetheart; what flower would you send her, to show her you loved her sincerely?" The dog picks up the red pink—that being the symbol of ardent love. In the same way, the dog may be taught to pick out the flag of any nation, etc.—according to the fancy of his trainer. By working up these questions effectively, the result may be made to appear very striking—yet the dog receives his information in the same simple way, all the time!

As to the animals which perform in the

circus, the elephant is among the most popular, and it seems wonderful that so unwieldy an animal can be made to perform any tricks at all. How set about training an animal of this kind? What is the first thing to be done? And how?

In compelling the elephant to perform, advantage is taken of the fact that the feet of the animal are peculiarly sensitive and he dreads any injury to them. Many of his tricks are based upon this principle. Thus, he is made to place one foot upon a low pedestal; then the other foot is tapped gently, and he raises this and places it beside the other—to get it out of harms way. The hind feet are treated similarly, in turn—the front feet being hit every time they are placed on the ground. In this way all four feet are finally placed upon the tub. The trick of inducing an elephant to partake of a meal is very simple. Animals will naturally eat anything placed before them, and it is only necessary to open a bottle of “pop” once or twice, and present it by hand, when the animal may be trusted to find out for himself how to get at its contents. In all such cases, the essence of the training consists in infinite patience, kindness, and constant repetition—showing the animal over and over again how a thing is done—in precisely the same way—and then forcing him to do it himself.

Lions and tigers are always dangerous creatures to work with, and one can never be sure of them, even when trained. “No wild animal,”

says Mr. Bostock, "is ever tamed, only trained, and the best training in the world is nothing when once the animal feels inclined to give way to his natural savage instincts."

"In time," continues Mr. Bostock, "the trained animal becomes so accustomed to performing that when he sees the paraphernalia of his performance he knows exactly what is expected of him, and does it naturally and readily. The successful performance of all trained animals depends on this almost instinctive following of long-accustomed habit, together with the pleasure the exercise gives to animals habitually confined in small cages.

"Leopards, panthers, and jaguars are all trained in much the same manner. Mme. Morelli puts them through a course of training very similar to that given the lion. They are taught to respect and look for the trainer, and have instilled into them as much awe as is ever bred in any animal—which is not saying a great deal. . . . Some animals train easily; others learn their lessons with great diffidence and some reluctance. What one lion may learn in a week another may learn in a month; what one tiger may do in two lessons may take another one several months to imitate feebly."

Goats are very sure-footed animals, and learn to perform many tricks requiring that quality—such as standing on the end of a bamboo pole. The Hindus teach goats to do this. Hogs may be

taught a number of clever tricks, and are far more intelligent than is generally imagined. Monkeys are known to be capable of being trained to a remarkable degree, the feats of "Peter" and "Consul" being well known to the American public. They are good imitators, and excessively curious, and it is this faculty and their ingenuity in satisfying this curiosity, which has amused many an audience; and has given rise to the popular notion that monkeys are far more intelligent than they really are. As a matter of fact, although a few of them are highly trained and intelligent, this is not the general rule.

A few birds may be trained to perform simple tricks, but not many. "Fortune tellers" employ tame birds to help them in their trade. A number of small paper envelopes are seen, in a row, one of which contains your "fortune" in the shape of a slip of paper, telling you certain platitudes about yourself. The bird picks this envelope out with his bill, from among others. How is it he selects this particular one? Some of the envelopes have seeds glued in their back-covers, and the bird naturally picks out one which has the seed thus attached—passing over the others to get to it. In most birds, when first caught, portions of the plumes of the pen-feathers are cut, so that the bird cannot escape; and then the nostrils of the bird are touched with bergamot or other odorous oil, by which it is for the time so stupefied that it perches quietly on the finger. It is then taught

to hop from one finger to another. In this way its training is begun.

Snakes are trained by the natives of India, and no other nation has succeeded in reaching so high a degree of efficiency as these East Indians. The fangs of the snake are first extracted, so as to render it harmless; it is fed on milk, and more or less drugged a good part of the time—as are many other animals which perform in public. The peculiar character of the native music seems to hypnotize the creatures, which, under its influence, emerge from their baskets and are handled with seeming impunity by the natives.

Seals are very intelligent animals—despite their looks—and may be taught a number of tricks of an intricate character—tricks requiring a delicate sense of balance and manipulation. Kangaroos, also, may be taught to box and wrestle with their trainers, and in many ways make excellent performers.

GAMBLERS' SECRETS.

Games of chance have always had a fascination for all classes of individuals, in all ages, and the professional “sharp” has made this weakness (which in some persons is developed into a ruling passion) a means for earning an easy livelihood, at the expense of the numerous “flats” who visit the race course or other places where gambling

is looked upon as a more or less legitimate pastime. The ingenious mechanical devices which have been employed for this purpose are really astonishing. Such clumsy appliances as loaded dice are, of course, out of date, though one ingenious "sharp" invented a table, the top of which was sheet steel under a very thin cloth covering. By means of an electro-magnet concealed within the table, its top could be converted into a powerful magnet, and the dice (which were prepared by having one side of metal while the rest were ivory) could be attracted to the table when the current was on or would fall in any haphazard position when the current was shut off. Dice, however, are generally suspected, and hardly anyone would venture to stake money upon the fall of the dice any more than he would upon "three-card monte."

Cards are the most fertile field for the gambler's revenue. Winning at cards depends largely upon the possession of certain high cards or the aces which win the tricks, and to gain possession of these cards is the gambler's object. For assuring this, various devices have been employed called "holdouts," mechanical contrivances concealed in the sleeve, which by a very slight pressure or movement in one direction, will instantly shoot the required card into the gambler's hand and recede again into the sleeve. One of the most ingenious and perfect of these was invented by a gambler named Keplinger, and the

device has ever since been known as the "Kep-linger holdout." The apparatus was worked by the knees, so that no motion of the arms or body was necessary. A slight separation of the knees was all that was required to shoot the card into the gambler's hand. The knees were thereupon relaxed, and the "holdout" receded like a flash into the gambler's sleeve. (See Frontispiece).

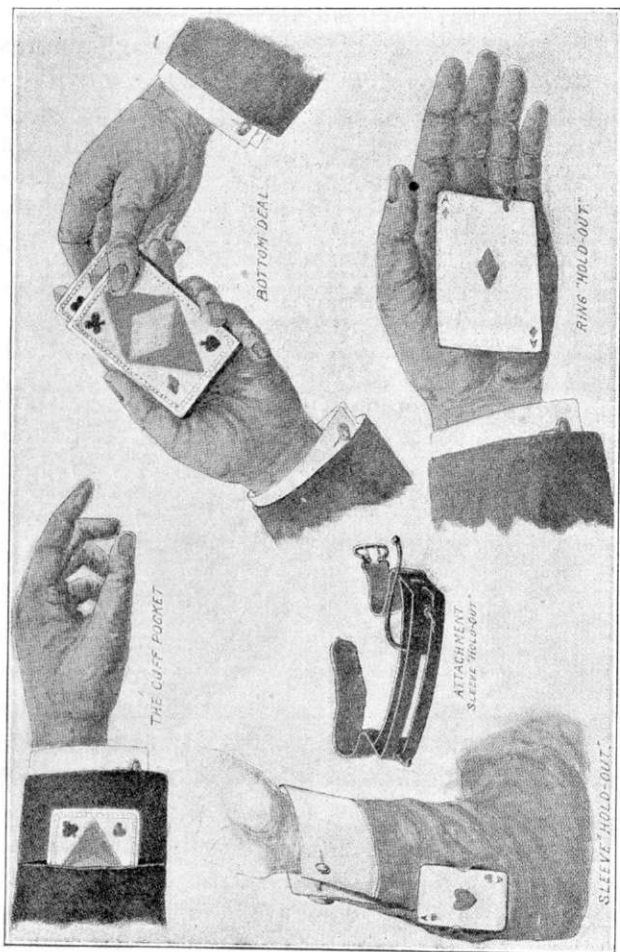
Another variety of "holdout" is that concealed in the waistcoat, and here the hand is held close to the body with the cards outspread while the thread is pulled, and in that manner a card shot into the hand under cover of the remaining cards. This, however, is a dangerous procedure which is rarely employed. A small but ingenious species of "holdout" is that known as "the bag." The small, sharp point, seen in the illustration, is stuck into the wood of the under side of the table, in such a manner that the flat bar runs along parallel to and just touching the wood of the table beneath. One or more cards are now inserted into the clip thus formed, and may be withdrawn by the fingers in the act of drawing cards on the table toward the body.

A daring yet simple variety of "holdout" is attached to the sleeve. It is buckled around the shirt sleeve under the coat, and two small pointed hooks, facing outward, press against the coat sleeve. These hooks may be separated or brought nearer together by pressing upon a small rubber tube. If now a card be placed against the coat

sleeve, on the outside, and the clips separated and then released, they will clasp the edges of the card through the cloth of the coat, and it will be retained there by the pressure of the spring in the "holdout." So long as the arm be held *downward*, the card is invisible; but the card may be obtained possession of by the fingers of the other hand when resting against the sleeve of the arm to which the "holdout" is attached.

A still simpler device is to have a small pocket cut in the coat sleeve at the seam. The "pocket" is merely a slit about three inches long, into which the required card is inserted. The fingers grasp the card and withdraw it with the others at the required moment. Another variety of "holdout" is known as the "ring hold-out." A ring is worn on one of the fingers, to the inside of which is attached, as part of the ring, a small wire clip or spring, flesh colored. The card is inserted under this spring, and in that manner is retained within the palm of the hand by the pressure. Experts in sleight-of-hand would not require a clip of this character, being enabled to palm the card without any mechanical aid.

Besides such devices as those just mentioned, the gambler depends for his success upon his dexterity in handling the cards during the actual progress of the game. Of course, marked cards are frequently employed for this purpose, but the expert gambler will succeed in marking the



cards with his thumb nail during the course of the play, so that, at the end of a few hands, he knows practically every card in the pack from the slight indications upon its back. Sometimes, also, cards are bent more or less slightly to insure their recognition—either individual cards or a number of cards together. If half a pack is bent in this manner, this is called “the bridge.” Each card in this section then has a slight curve, as shown in the illustration.

A gambler may even deal to himself or to any person forming the circle a particular card which is known to him. This card is at the bottom of the pack, and the “sharp” deals off the cards from the top of the pack continuously until he reaches the person into whose hand he desires to place the card next to him, when, by a rapid movement, he withdraws, not the top but the bottom card with the fingers instead of his thumb. This trick, when rapidly and well executed, is practically undetectable.

Card “sharps” also employ other devices for gaining knowledge of the cards dealt to every member in the circle. In order to gain this knowledge, a small mirror is employed. Sometimes this mirror is attached to a needle point, and fixed to the under side of the table nearest the dealer. If, now, in dealing, each card be passed over the mirror in turn, the gambler will be enabled to tell the position of each card dealt,

and to follow the cards before a single play can be made.

But a mirror of this character is a dangerous device, and it is easily detected. To obviate this, very ingenious schemes have been employed. A small mirror is inserted into the bowl of a pipe, laid carelessly on the table, the bowl being turned slightly upward and toward the dealer. Now, in dealing the cards, they are passed each in turn over the bowl of the pipe, and in this manner the magnifying glass it contains conveys to the "sharp" all the required knowledge as to the cards contained in each sitter's hand. Occasionally "sharps" employ a mirror ring for this purpose; a large signet ring being used which, during the course of play, is swung around so that the signet faces the palm instead of the back of the hand. The signet then swings open on a pivot hinge and discloses a tiny magnifying mirror beneath. By the aid of this mirror, the majority of cards can be detected as dealt. At least aces and court cards can be distinguished from cards of lower values, which is the chief thing to be discovered.

There are a number of other ingenious devices employed by professional "sharps," but the above will at least give the reader an idea

of the extent to which this practice has been carried, of the remarkable ingenuity displayed by manufacturers of such devices, and of the dexterity and daring of the gamblers themselves in employing them.

HOW THE VARIOUS STAGE EFFECTS ARE PRODUCED.

There is a charm and a fascination about the stage which nothing else equals in just the same way. The effects are now-a-days so realistic, too, that one is at times quite carried away, and really imagines, for the moment, that he *is* in a storm at sea, and almost turns up his coat-collar to escape the rain and the howling wind, which are so plainly heard. Yet these effects are but illusions, and are all produced by mechanical and chemical contrivances "behind the scenes." The following is a brief description of the most important of the methods employed to duplicate these various effects.

Day and *night* effects, and the change from one to the other, and kindred results, are of course produced by a gradual raising or lowering of lights. The sun is a bright light, concentrated on one spot, behind the back "drop" or curtain. The *moon* and *stars* are similarly produced—the stars being star-shaped openings in a black tin box—through which the rays of light are allowed to pass. The *rainbow* effect is produced by pass-

ing a strong beam of light through a large glass prism. *Rain* is imitated by means of "rain machines," which are of various constructions. One of the best is made by dropping a quantity of small shot on to a piece of thick brown paper, pasted over hoops, and turning the hoops in a round motion, so as to cause the shot to run round and round over the paper in a circular "swish." A very good imitation of rain is thereby produced. Another method is to provide a hollow tube, containing divisions made at right angles, one to another, and allow dried peas to roll down—thereby striking the angles of the tin tubes, and producing a sound very like heavy rain.

Wind is produced by rapidly rotating a large wheel, fitted with various paddles, which rub against silk, stretched tightly. The more rapidly the wheel is revolved, the higher the wind. *Thunder* is produced in various ways. A piece of sheet tin or iron is shaken—giving a very good imitation of snappy thunder. Large drums are also used, with muffled sticks, specially prepared. These are known as "thunder drums," and the distant roar of thunder may be almost perfectly produced by this means. A large and heavy cart is also employed, on occasions, being filled with stones and heavy material, and mounted on uneven wheels. This is rolled across the stage. Large theaters also employ a special device, consisting of a long wooden tube, provided with a series of "elbows"—somewhat similar to the rain

apparatus—and a large and heavy cannon ball is allowed to roll down this tube, loud crashing sounds resulting. The wind machine is generally used in conjunction with thunder effects.

Lightning is also produced in a variety of ways. Magnesium powder, when ignited, will flash up with great brilliancy and suddenness. Electrically charged files, when rubbed together, will emit a series of brilliant flashes. Electric wires may be made to glow for a moment with intense vividness; and the jagged, forked variety of lightning can be imitated by this means very successfully. *Snow* is generally produced by means of finely chopped pieces of paper, evenly distributed over the stage, from the “flies,” by means of a special device. *Waves* of the ocean are produced by men, on opposite sides of the stage, who wave up and down the canvas which runs across the platform. The noise of the surf upon the beach is obtained by allowing two or three ounces of bird shot to roll around in a box of light wood, lined with tin. It is a variety of the rain machine. The *crash* effect—to imitate someone falling down stairs—is similar to the wind machine in principle, the paddles scraping against a springy piece of board, after the manner of a baby’s rattle. *Fire* and *smoke* effects are very complicated, and the fireworks, red fire, steam, and all kinds of stage properties used upon the modern stage are sometimes very elaborate and costly.

VENTRILLOQUISM.

Ventriloquism has been practised for many centuries, but it is only of late years that it has been understood scientifically, and studied from that point-of-view. The dictionary defines it as "the imitation of distant sounds." As a matter of fact, however, there are *two* distinct kinds of ventriloquism, the "near" and the "distant," and they are acquired by entirely dissimilar methods.

Near-ventriloquism is what the figure worker relies upon in working his puppets, and precisely the same kind of ventriloquism is used to give variety to distant effects by proximate sounds. Distant-ventriloquism need not necessarily be the imitation of distant sounds, but of sounds which for some reason or other *appear* distant to the spectator; when, for example, the ventriloquist imitates the voice of a man enclosed in a box. Phonetically, this gives the same result.

The majority of practical ventriloquists agree in saying that ventriloquism is an art which can be acquired, and that, while some performers are necessarily better than others, everyone can learn to be a ventriloquist if he will put in the amount of practice necessary in order to become a successful performer.

The ventriloquial voice is obtained, as a rule, by placing the vocal organs in a certain position. It would be both useless and unnecessary to attempt to describe this, and I shall consequently confine myself to a description of the various po-

sitions which the performer must assume more or less voluntarily with his mouth and throat in order to produce the desired results.

Practical ventriloquists declare that the most important step to be acquired is what is called "the ventriloquial drone." This is attained as follows:

To acquire this, take a long, deep breath, and, holding it, make a sound at the back of the throat, as though you were trying to be ill, and as you do this, utter a prolonged "ah," exhaling slowly. The "ah" will at first be a grunt, but try again, making a greater effort to produce a reaching sound, prolonging the "ah" when it begins to sound like an uncertain drone, and finally settles down to a sustained, clear, *hum*, like that of a distant bee-drone, from which it derives its name. The farther back in the throat the sound is made, the more distant will it appear to the listener, and the more forward in the throat it is made, the nearer will it appear to the listener.

You may not get the ventriloquial drone at once, but you will with a little practice. When you hear that clear drone, you may know that you have your mouth as it should be for ventriloquism, but until you do produce that, you must hark back, and try again, because, unless this foundation be laid properly, all that follows is unsatisfactory, and your ventriloquism will lack that distant quality to obtain which is to be a ventriloquist.

This bee-drone sound is the basis of many imitations of the noises of nature. For example, the "bā-a-a" of a sheep, the crow of a cock, the bark of a dog, may all be imitated by reproducing these sounds, with the throat in the drone position. From these noises the student should proceed to what is known as echo practice, reproducing in a faint and distant manner, sounds made in a loud and pronounced measure immediately before.

Not only are various distances imitated, but the good ventriloquist can create sound, as it were, in any part of the room he chooses, above, or below the level of his head, as well as on its direct level. These effects are all produced by placing the voice in various portions of the palate and mouth; and depends upon whether the tone is directly produced by the throat, or impelled against the hard or soft palate.

In "near-ventriloquism," on the other hand, the voices are *not* thrown, but the locality is suggested by acting, with the assistance of screens and curtains, by the assistance of talking figures—and, of course, by a prevention of movements of the lips.

In imitating the piercing female voice, ventriloquists cultivate what they call the "Punch" or "The eek" voice. The tongue is placed against the back of the front teeth, and th-e-ek th-e-e-e-k is pronounced, prolonging the e's, thinking at the same time of a squeaking door, or the upper notes

of a clarinet. Upon this depend many qualities and variations of voice used in entertaining.

In opposition to this is cultivated what is known as a grunt voice. In this case, the tongue lies flat, and the whole of the vocal chords lie loose, and less effort is made to speak than would be made naturally, as the words are simply grunted into the back of the mouth—the lips being still, and only the back of the tongue being used. The tip of the tongue still lies against the back of the lower teeth. This voice is a caricature of old men, who have lost command over tongue and lips, and who speak with open mouths.

The ghostly voice is as a rule a sort of loud whisper. The little girl, or any child, is an extension of the Punch voice—the words being minced. For negro dialect I should advise the student to listen closely to the conversation of two Southern negroes, or, failing this, attend a good minstrel entertainment.

The first essential requirement for complete deception of the audience, during a public entertainment, is to acquire speech with still lips. As a matter of fact, only a selected vocabulary can be employed, without using the lips, though the performer appears to have perfectly free choice of words. This effect is produced partly by a careful selection of those words which do not necessitate the use of the lips, and when such a word does appear, by skillful manipulation of sound, so that the same effect may be produced

without employing the lips at all. Thus, if the word "mother" is to be said, the performer would say "nother" and so on, always substituting another letter for the labial which is omitted.

What words are suitable for ventriloquial entertainment can only be found by practice; and here, as in conjuring, continued practice and experience are necessary.

If the dialogue of any ventriloquial performance be analyzed, it will be found at once how rarely words are used which employ the lips. Take the following, by way of example:

- "Performer: Ladies and gentlemen—
Old Man: 'Ere, 'ere.
P.: Silence, sir!
O. M.: Only said 'ere—'ere.
P.: Ladies and gentlemen—
O. M.: You said that afore.
P.: Ladies and gentlemen—
O. M.: They know what they are without you tellin' 'um.
P. Silence! Ladies and—
O. M.: (Sneezes) gentlemen.
P.: You have a cold.
O. M.: Yes, got it 'ot.
Old Lady: I knew he would.
O. M. (to O. L.): Don't you begin, you old scare-crow.
P.: That's not the way to speak to a lady, sir.
O. M.: She ain't a lady.

O. L.: What am I then?

O. M.: My ol' gal—bless 'er 'eart. (Sings.)

“My old Dutch I likes to be near,
And sing to her, like a gay cavalier.”

O. L. (Sings): “I cannot sing the old songs”

O. M.: No, nor the new ones either. Chuck it, ol' gal—chuck it.”

It is possible to imitate the sounds made by various animals far more easily than would appear at first sight. Anyone can crow like a cock if he imitates nature, but there are as many varieties of crowing as there are spiders. The shrill little bantam, the awkward bungling crow of the Asiatic breeds, such as the Cochin; the clarion note of the black Spanish; the laughable attempt of the young cockerels when learning—all are effective in contrast with each other. If you imitate a bantam crow, use the Punch voice, and you will get it at once; for other kinds you partly assume ventriloquial attitude as regards chest and throat. Imitate crowing, and this will give you the crow at a distance.

In imitating ducks you must not say “quack” because a duck, having no lips, does not say “quack.” I think a duck tries to say “quack,” and if you try, and say “uack,” and do not use your lips, and use your mouth as a duck does its upper and lower bill, opening it as wide as you can, and making the exaggerated action the bird does, you will hear from your mouth an exact im-

itation of its cry. The first "uack" must be loud, and the following "uacks" fainter and fainter.

As a matter of fact, no parrot ever said "Pretty Polly" for the same reason that a duck does not say "quack." For the parrot, and for parrot talk, use the Punch voice, but you must avoid labials. By listening carefully to a parrot this may be verified.

Cat: Contrary to universal belief, again, a cat does not say *meow*, but *'eeouw*, and this is as capable of proof as we found it in the case of the parrot or duck. In spite of the fact that cats are classed as "dumb animals," they may, nevertheless, be heard very distinctly outside the ordinary town-dweller's window about 2 a. m.; and the only person who might be glad of this is the prospective ventriloquist, who should seize this occasion to study the varieties of sound made by these animals.

The Blue bottle is imitated by creating a buzzing sound in the throat; *not* the ventriloquial drone, however, but a *Near Moan*, about the pitch of the hum of the blue-bottle. The circular saw mill, or buzz-saw, is merely an exaggerated blue-bottle sound. Sawing wood is imitated by breathing through saliva at the roof of the mouth; the turning on of a tap, and the first burst of compressed air, is suggested by "pfitt!" and the sound of water coming into a cistern or pail by the use of more saliva. The sound of tearing calico is imitated by fixing the off lip and risible muscles in

the position they would occupy in grinning. Then close them, and draw the air into the mouth, opposite the molar teeth, and the effect of tearing calico is imitated exactly.

All the sounds I have listed above are, of course, examples of near-ventriloquism, this being the type most frequently heard in all talking figures,—which is employed throughout nine-tenths of any public entertainment. Distant-ventriloquism exhibits the skill of the performer, and to that I now revert.

Distant-ventriloquism is the voice by which all ventriloquists make a supposed person speak from a long distance, or from, or through the ceiling. In the first place, with your back to the audience, *direct their attention* to the ceiling, by *pointing to it or by looking intently at it*. Call loudly, and ask some questions, as though you believed some person to be concealed there. Make your own voice very distinct, and as near the lips as possible, inasmuch as that will help the illusion. Then, *in exactly the same tone and pitch*, answer; *but, in order that the same voice may seem to proceed from the point indicated, the words must be formed at the back of the roof of the mouth*. To do this the lower jaw must be drawn back and held there, the mouth open, which *will cause the palate to be elevated and drawn nearer to the pharynx*, and the sound will be reflected in that cavity, and appear to come from the roof. Too much attention cannot be paid to the manner in

which the breath is used in this voice. When speaking to the supposed person, expel the words with a deep, quick breath.

When answering in the imitative manner, the breath must be *held back and expelled very slowly, and the voice will come in a subdued and muffled manner*, little above a whisper, but so as to be well distinguished. To cause the supposed voice to come nearer by degrees, call loudly, and say, "I want you down here," or words to that effect. *At the same time make a motion downwards with your hands.* Hold some conversation with the voice and cause it to say "I am coming," or "Here I am," each time *indicating the descent with the hand.* When the voice is supposed to approach nearer, the sound must alter, to denote the progress of the movement. Therefore let the voice, at every supposed step, roll, as it were, by degrees, from *the pharynx more into the cavity of the mouth*, and at each supposed step *contracting the opening of the mouth*, until the lips are drawn up as if you were whistling. By so doing the cavity of the mouth will be very much enlarged. This will cause the voice to be *obscured, and so appear to come nearer by degrees.* At the same time care must be taken not to articulate the consonant sounds plainly, as that would cause the disarrangement of the lips and cavity of the mouth; and in all *imitation voices* the consonants must scarcely be articulated at all, *especially if the ventriloquist faces the audience.* For example:

suppose the imitative voice is made to say, "Mind what you are doing, you bad boy," it must be spoken as if it were written "'ind 'ot you're doing, you 'ad whoy." This kind of articulation may be practised by forming the words in the pharynx, and then out of the mouth by sudden expulsions of the breath clean from the lungs at every word. This is most useful in ventriloquism, and to illustrate it we will take *the man on the roof* as an illustration. This is an example almost invariably successful, and is constantly used by skilled professors of the art. As we have before repeatedly intimated, the eyes and attention of the audience must be directed to the *supposed spot* from whence the illusive voice is thought to proceed.

It would, therefore, be impossible for a ventriloquist to produce an echo in a room of ordinary size, as the walls being so near, would cause the sounds to be blended, and would only produce one impression on the ear; and yet the skilled ventriloquist can with ease imitate in a room, a mountain echo! I will give the instructions, as it is very amusing.

Turn your back to the listeners; whistle loudly several short, quick notes, just as if you were whistling for a dog; then, as quickly as possible after the last note, and in as soft and subdued a voice as possible, whistle about a third the number of notes, but it must be in *the same note or pitch*; this will cause the last whistle to appear just like an echo at a great distance. This imita-

tion, if well done, never fails to take the listeners by surprise, and causes astonishment. The same thing can be done by shouting. Call aloud any sentence, such as "Halloa, you there!" Let your voice be formed close to the lips; then quickly, and mind in the *same pitch or note*, speak the same words in a very subdued voice formed at the back of the mouth. This is not difficult, and is very effective.

POINTS TO BE REMEMBERED.

In giving the succeeding instructions, it must be borne in mind that the power and acuteness of hearing is possessed in a greater or lesser degree by different individuals; it depends upon the sensibility of the auditory nerves. It will not be out of place nor uninteresting to show the effect of sound and the manner in which it is heard by the organs of the ear. It is said that the human ear is capable of appreciating as many as thirty-two thousand vibrations in a second, and that the whole range of human hearing, from the lowest note of the organ to the highest known cry of insects, as of the cricket, includes more than nine octaves.

Sound first strikes the drum or tympanum, a thin membrane which closes the aperture of the ear; when this drum vibrates to the sonorous undulations of the external air the vibrations are communicated by minute bones, muscles, and fluid

in the cavity of the ear, and are then conveyed to the brain; and to show how absolutely necessary it is that all the organs of the would-be ventriloquist should be entire and without fault to succeed well, we will show how the ventriloquist makes that nice distinction of the gradation of sound by which he is enabled to judge whether he is causing his voice *to appear* at a proper distance from his audience or not.

Let any one firmly close both ears by stopping them, then speak a few words; now, as the ears are stopped, the sound cannot enter immediately to the drum of the ear, but it takes cognizance of the sound by a passage called the eustachian tube, which extends from the back part of the mouth to the cavity immediately behind the drum of the ear.

The sound vibrations made in the mouth are transmitted along this tube to the interior part of the organ of hearing. Now it is by a nice judgment of sound by this tube that the professional ventriloquist judges the majority of his voices, especially those greatly obscured or muffled. Not only must the auric nerves of the would-be ventriloquist be perfect, but he will become more proficient as he is able to study and understand the human voice. There is the language of emotion, or natural language by which the feelings manifest themselves without previous teaching, and which is recognized and felt without teaching—such as the scream of terror, the shout of joy, the

laugh of satisfaction, sarcasm or ridicule, which are made by man, and understood by fellow man, whatever may be their speech or country.

There are also distinct qualities of voice, peculiar to each person, both in tone and quality; the best practice is to imitate three or four peoples' voices and let them be of a different tone and pitch.

The ordinary compass of the voice is about twelve notes, and a very good practice to the attainment of the art is to call about in a certain note, *and then in the octave to that note*; do this several times a day, changing the note, also speak a sentence all in the same note or pitch, properly called intonation, loud at first and then by degrees lower; this kind of practice will enable the ear to judge the modulations required to make a voice appear to recede or come nearer by degrees.

CONCLUDING REMARKS.

When the student is acquainted with the voices before described, he may imitate many others by *contraction and expansion of the glottis, and by modification of the cavity of the pharynx and month*. The best way to practise is in a room quite alone, talking aloud; and, while doing so, making all sorts of *contortions with the muscles of the mouth and jaws*—first fixing the jaws in the manner already described, then drawing the lips inward, next putting them forward, at the

same time putting the tongue in different shapes and positions of the mouth; also by speaking in the natural voice, and answering in the falsetto pitch, which is the imitating voice for women and children.

I am confident that enough has been said to enable any one with a good range of voice to attain proficiency in the art; the student always remembering (and it cannot be too often repeated) *that to render a voice perspective, the most essential thing is to attend to the study of sound as it falls upon the ear; then imitate that sound by the different contractions and expansions of the muscles of the throat, mouth, face and jaws.* During these various contractions and expansions, draw in a long breath and talk, first rapidly, then slowly, but always with a *slow expiration of breath.* Do this a dozen times consecutively for several days, at the same time taking particular care to *elevate and depress the roof of the mouth, especially the back part, as this movement will cause the voice to appear near, or at a distance.* Ample directions have been given as to how this is done, but let it be understood that it is most essential. The student may then practise before a friend, and he will be astonished to find that he can deceive any listener as to the point from which the sound comes; and will be gratified that he has become the source of great amusement to himself as well as the circle in which he moves.

Thus we have acquired a working power in

an art which, I trust, I have now explained to the satisfaction of the reader. The progress of the student will, of course, be facilitated by an inherent propensity to mimicry, which often approaches some of the minor attainments of ventriloquism. In every company some person may be found who, without any professional instruction, can give admirable imitations of the voice, gait, and peculiarities of a friend or acquaintance; thus proving that nature, to some extent, supplies the basis upon which, if we may use the phrase, the complete superstructure of vocal illusion may be raised. The possession of this quality would amount, comparatively, to little, without instruction and perseverance. Here, as in other respects, practice makes perfect; and, more than that, a diligent application of our rules will invest the originally defective amateur with an attainment which the ignorant will attribute to the possession of a supernatural gift.

All I need to say in conclusion is that the rules propounded will not only clear away imaginary difficulties from the path of the student, but entitle him to greater or lesser success according to the zeal with which he studies and practises the art.